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THE MYSTERY OF TORRALBA--THREE INVESTIGATIONS.

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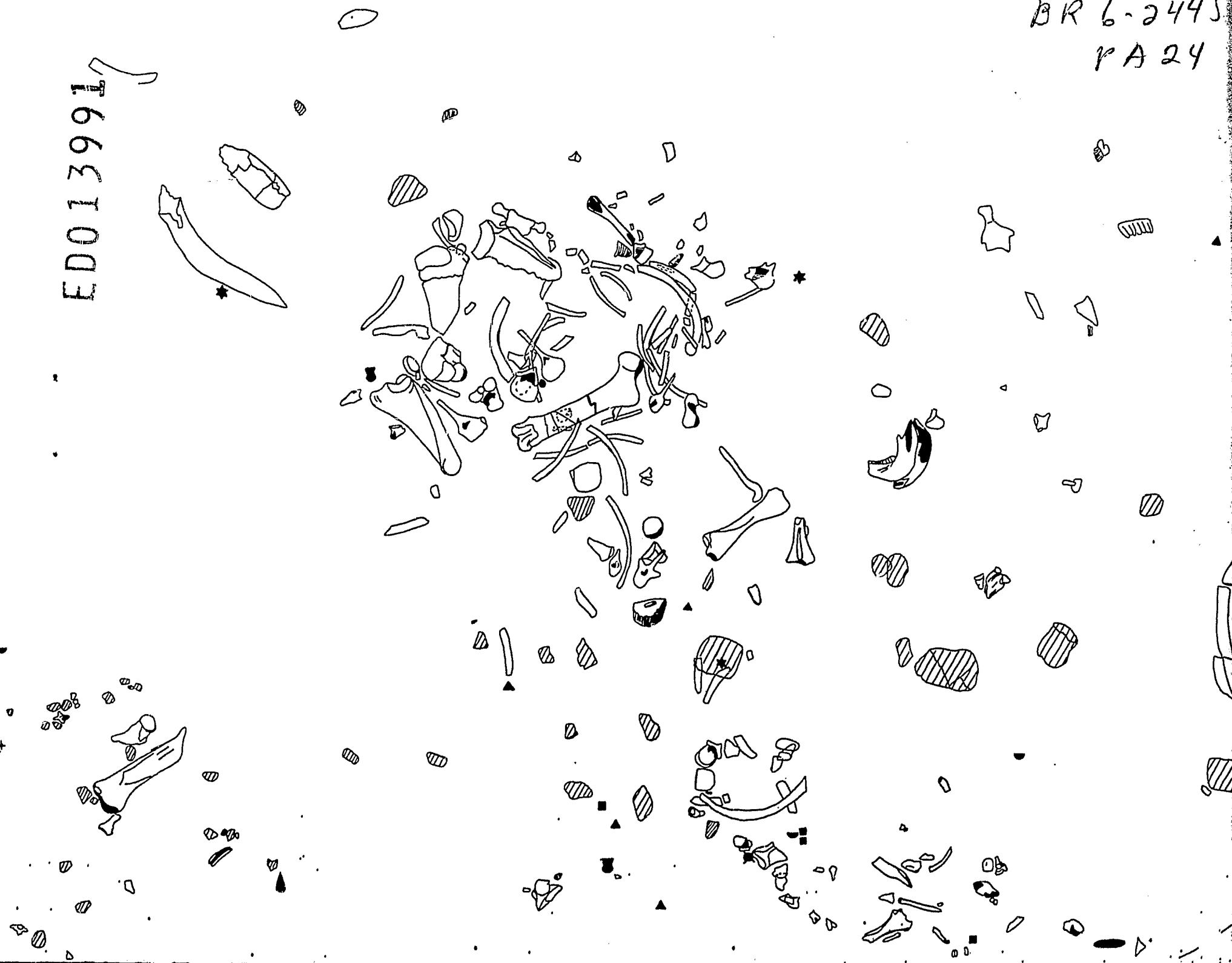
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\*SIMULATION, INVESTIGATIONS, \*SOCIAL STUDIES, ANCIENT  
HISTORY, CULTURAL FACTORS

ARCHEOLOGICAL DATA AND INTERPRETATIONS FROM THREE INVESTIGATIONS ARE USED TO PRESENT STUDENTS WITH THE TASK OF ANALYZING A SITE AT TORRALBA, LOCATED APPROXIMATELY 100 MILES NORTHEAST OF MADRID, SPAIN. SITE DRAWINGS, PHOTOGRAPHS, AND ACRYLIC MODELS OF ARTIFACTS ARE USED. STUDENTS DO NOT ENGAGE IN THE ACTUAL FIELD WORK BY WHICH DATA ARE ACCUMULATED. HOWEVER, THE OPPORTUNITY IS PROVIDED TO SIMULATE THE ROLE OF AN ARCHEOLOGIST THROUGH SUBTASKS OF (1) SIFTING, ANALYZING, AND ORGANIZING THE DATA TO ESTABLISH HYPOTHESES, (2) TESTING THE HYPOTHESES THROUGH CONSIDERATION OF SPECIFIC DATA, AND (3) MODIFYING THE HYPOTHESES INTO CONCLUSIONS THAT ARE IN KEEPING WITH CAREFUL ANALYSIS. THE INVESTIGATIONS ARE INTENDED TO SHOW THE STUDENT BOTH THE POTENTIAL AND THE LIMITS OF DATA ANALYSIS FOR EXPANDING ARCHEOLOGICAL KNOWLEDGE AND UNDERSTANDING. (TC)

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# THE MYSTERY OF TORRALBA

## THREE INVESTIGATIONS

Edgar Bernstein

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CHICAGO SOCIAL STUDIES PROJECT

Materials Developed by  
CHICAGO SOCIAL STUDIES PROJECT  
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## Teacher Materials

### The Mystery of Torralba

The following archaeological data and interpretations represent the work at Torralba of Professors F. Clark Howell and Leslie Freeman of The University of Chicago. Professor Freeman has, over many months, offered invaluable critical and constructive comments as the Project worked on the creation of these student investigations. Plate IV is his original rendering of the site plan for level B4a; the other site plans (Plates I, II, and III) are our own versions based upon his drawings. The organization of these investigations follows the interpretations of Professors Freeman and Howell of the data on level B4a at Torralba.

This set of three investigations is used to present students with the task of analyzing the Spanish archaeological site at Torralba, located approximately one hundred miles northeast of Madrid. There are a number of objectives set for these materials. To begin with, they provide a student with the opportunity to simulate the role of archaeologist. While students do not engage in the actual field work by which data are accumulated, they do work with the data in ways that approximate those of the archaeologists. They do this by sifting, analyzing, and organizing the data to establish hypotheses; by testing the hypotheses through consideration of specific data; and by modifying the hypotheses into conclusions that are in keeping with careful analysis. One may recognize that, broadly speaking, this follows a process of inquiry appropriate to all investigations of social phenomena, although the data are not always as tangible and specific as are the tool models and site plans of these investigations. These investigations help to introduce early in the world history sequence the need to recognize both the limits and the potential of data analysis for expanding knowledge and understanding.

More particularly, the three investigations demonstrate the way archaeologists proceed in their attempts to reconstruct aspects of man's early prehistoric past. Because the men of Torralba stayed at this site one-half million years ago, it is possible to use this site to make supportable speculations about some of man's culture development in this ancient period. The evidence, for instance, indicates a degree of organization and patterning of cultural activities greater than might be expected for societies of this period.

Discussion of data (following notes by Professor Freeman): "Level B4a is exposed over a total of about three hundred square meters. The cultural materials in at least the northern one-half of level B4a seem to have been deposited at one point in time, since they are found in association with bones of one large elephant over the whole area. The most striking feature on level B4a is the half skeleton of this straight-tusked elephant, lying in the extreme northern sector of the exposure (Plate IV, Area 1). The bones of this individual, spread over more than fifty square meters, were found in semi-articulated position, lying skin side up, head to the west. Only bones of the left side of the animal and some vertebrae seem to be represented. The cranium and pelvis are missing. A few bones of two other elephants (a smaller adult and a juvenile) were found associated in this distribution, but they are far outnumbered by bones of the large

animal. A single horse molar is the only other animal bone in Area 1. Area 1 differs from adjacent areas in that most of the contents are bones from a single individual. Bone density in this accumulation is also higher than in surrounding clusters. The treatment of bone in Area 1 differs from that in surrounding concentrations of materials; there is little evidence that bone was deliberately broken in processing.

Stone artifacts found associated with the bones are a single, tiny flint cleaver, a thick flint borer, a quartzite retouched flake, a discoidal core found near the northeastern periphery of the distribution, a limestone core found in the same region, and three cores (two flint and one limestone) on the peripheries of the distribution.

There are many possible explanations for the paucity of finished stone tools in Area 1. Perhaps the most economical hypothesis is that tools were removed from Area 1 for use in continued processing of materials in other areas nearby. The occurrence of cores in the concentration would seem to indicate that some tools were manufactured during the course of butchering activities undertaken in Area 1.

Regions of bone and artifact distribution of a distinct nature exist to the south, southeast, and southwest of Area 1. There is no evidence that these areas are not contemporaneous in time of deposition with the "half elephant," and some bones of that individual were actually found in each area.

Area 2 (Plate IV) is a cluster approximately four meters square, containing about thirty bone fragments, including elephant bones (pieces of a small scapula, at least two small tusks, and some pelvic fragments, as well as broken limb bones), and a higher proportion of bone concentration of other animals than that found in Area 1. All bones in Area 2 have been broken into bits. A convergent side-scraper and two "waste" flakes are also part of the distribution.

Area 3 (Plate IV) resembles Area 2 in contents and may, in fact, be continuous with that accumulation. Rib and vertebra fragments from the large elephant in Area 1 are numerous here, and bones of the smaller adult noted there, and of an infant, were also present. Many fragmentary bones of horse, cow, and deer were found in Area 3. As in Area 2, all bones from this accumulation are broken, and many bear the marks of cutting and flaking. Stone tools in Area 3 include a large quartzite cleaver, a quartzite hammerstone, a flint sidescraper, a notched flint tool, a flint borer-bec, a quartzite denticulate, and two flint "waste" flakes. A single fine discoidal flint core was found between Areas 1 and 3 and may belong to either.

Area 4 (Plate IV) is a larger cluster of materials than either Area 2 or 3. However, in bone content, Areas 2, 3, and 4 resemble each other to a great extent. Elephant rib and vertebra fragments, parts of limb bones, teeth, and bits of skull were found in this area. The distribution includes part of a long bone of the big elephant in Area 1 and a broken ulna from the infant in Area 3. Bones of horse and cow are very numerous, and there are some rare deer and rhinoceros bones. Stone tools include sidescrapers, a notch, a retouched flake, two cleavers, and

seven 'waste' flakes. The Area 4 accumulation also includes many small, unworked limestone rocks, unlike the other areas. All three of these areas yielded patches of wood charcoal and pieces of wood."

Professor Freeman suggests the following tentative conclusions from the data:

1. The entire area of level B4a was occupied at one time.
2. The men of Torralba were hunters who might have specialized in elephant hunting but who might, as well, have taken any game that was available. Thus, it might have been a taste for elephant meat or an effective pragmatism that determined their economic activities.
3. The area was used to process the products of the hunt; to do so, sub-areas were used differently to carry out the stages in the processing. Referring to Plate No. IV, the following areal differentiation is suggested:

Area 1 - used for the primary processing of meat and other materials (and possibly preparation of tools used in this processing).

Areas 2, 3, and 4 - used for manipulation of the products of primary processing (i.e., breaking bones to get at marrow and/or to be made into tools). These manipulations may have involved fire in Areas 3 and 4.

It is important to recognize that the tools found at level B4a do not necessarily represent the total tool kit possessed by the men of Torralba. To consider this tool kit complete may lead to a distorted view of the total culture of these people. Perhaps other types of tools (such as a range of hunting weapons, which is not in evidence) were carried away when the people departed.

In summary, evidence found at Torralba on level B4a suggests a complexity of cultural activities which was previously thought to be associated with the Middle and Upper Paleolithic. That this complexity evidently existed at such an early period provides a new perspective on the cultural evolution of prehistoric man.

The organization of these investigations may be seen as follows:

Investigation No. 1 - confrontation with the problem (i.e., on the basis of the data, what cultural activities were taking place at Torralba on level B4a?); establishment of hypothesis based on initial examination of data.

Investigation No. 2 - analysis of selected data (stone tools) to pursue validity of hypothesis. Classroom sets of tool models provide part of the student data.

Investigation No. 3 - consideration and analysis of additional data; modification (?) of original hypothesis; conclusion re. the mystery of Torralba.

For a more detailed and technical report on the Torralba site, the following article may be helpful: L. G. Freeman, Jr., and K. W. Butzer, "The Acheulean Station of Torralba (Spain): A Progress Report," Quaternaria, VIII (Rome, Italy) (1966) pp. 9-21.

## General Bibliography -- Prehistory

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Material on Chinese pre-history.

2. Ardrey, Robert. African Genesis. New York: Collins, 1961.

A popular but well-informed work on the question of Africa as the cradle of man.

3. Bishop, C. W. "Long-Houses and Dragon-Boats," Antiquity, XII (1938).

Material on Chinese pre-history.

4. Braidwood, Robert J. Prehistoric Men. Chicago: Chicago Natural History Museum. (Series in conjunction with Oriental Institute. of the University of Chicago), 1957.

An excellent exposition of early pre-historic living conditions and tools and particularly of the food-producing revolution in the Middle East in Neolithic times, by an expert in the field who is responsible for much of the field work done in this area. Sections on tool variations tend to be technical and detailed.

5. Braidwood, Robert. "The Agricultural Revolution," Scientific American, CCIII (September, 1960).

A discussion of the food-producing revolution by a specialist in the field, with attempts to date the advent of agriculture.

6. Ceram, C. W. Gods, Graves and Scholars. New York: Alfred A. Knopf & Co., 1956.

Mainly a discussion of archaeological activities and finds on the early ancient civilization, this is an exciting history of archaeology and effectively illustrates the quality of adventure in this field. Very readable.

7. Childe, V. Gordon. Social Evolution. Cleveland: Meridian Books, 1963.

A detailed and technical book which uses existing archaeological evidence to construct a picture of the evolution of man's societies. Childe compares archaeological evidence to previous theories advanced on social evolution. A complex book, it is valuable.

8. Clark, John Desmond. The Prehistory of Southern Africa. New York: Penguin Books, 1959.

A discussion of human remains found in Southern Africa providing some data on the question of Africa as the cradle of mankind.

9. Clark, J. G. D. "New World Origins," Antiquity, XIV (1940).

A consideration of pre-history in the New World, with some attention to the change from hunting to farming.

10. Clark, J. G. D. World Prehistory: An Outline. Cambridge: University Press, 1961.

The title describes this useful cataloging of knowledge on prehistory.

11. Clark, J. G. D. Prehistoric Europe: The Economic Basis. Stanford University, Calif.: Stanford University Press, 1966.

A discussion of evidence of European pre-historic economic activities including consideration of the possibility that long-distance trade existed in pre-historic Europe.

12. Coon, Carleton S. The Story of Man. New York: Alfred Knopf & Co., 1962.

An excellent and comprehensive history of man with lengthy and accurate discussions of prehistory. Quite up to date, it includes important new archaeological evidence from Africa and the eastern Mediterranean. The book deals with the races of man and their origins, and has some fascinating ideas on Neanderthal Man and on the Neolithic Era.

13. Curwen, E. C. Plough and Pasture: The Early History of Farming. New York: Henry Schuman, 1953.

This work gives some attention to the beginnings and development of agriculture in pre-historic times.

14. Dewey, Edward S., Jr. "The Human Population," Scientific American, CCIII (September, 1960),

A discussion of the relation of population size to pre-historic economic endeavors and the effects on population size of the food-producing revolution.

15. Epic of Man (Life Magazine: 1956)

A good pictorial account of the various pre-historic account of the various pre-historic men and their characteristic cultural achievements. The paintings used are effective representations

of a fairly accurate and up-to-date resumé of knowledge about pre-history, although very recent finds and theories are not included. A shorter version of this material is also available on film strips. (This work also covers the early civilizations of the world.)

16. Golding, William. The Inheritors. London: Faber, 1962.

A fascinating and well-written novel about the clash between two pre-historic cultures which are accurately and effectively described.

17. Gordon, D. H. The Prehistoric Background of Indian Culture. Bombay: N. M. Tripathi, Ltd., 1958.

18. Hooten, Ernest A. Up From the Ape. New York: The Macmillan Co., 1946.

A basic book on the evolution of the physical characteristics of man.

19. Howell, F. Clark. "The Place of Neanderthal Man in Human Evolution," American Journal of Physical Anthropology, IX (1951).

Discusses the possibility that modern European man derived from a mixture of Neanderthal and other pre-historic types of man in the Middle East.

20. Howells, William W. "The Distribution of Man," Scientific American, CIII (September, 1960).

An interpretation of archaeological evidence to support the idea that homo sapiens arose in a single center of the world and migrated to other parts of the earth and underwent racial differentiation subsequently.

21. Jackobsen, T. "Primitive Democracy in Ancient Mesopotamia," Journal of Near Eastern Studies, II (1953).

A discussion of the effect of the institution of the council of the elders in pre-historic Mesopotamia on the political practices of historic Mesopotamia.

22. Levy, Gertrude Rachel. The Gate of Horn: A Study of the Religious Conceptions of the Stone Age and Their Influence Upon European Thought. London: Faber and Faber, 1948.

23. Mead, Margaret. Cultural Patterns and Technical Change. New York: Mentor Books, 1959.

A consideration of the effects of new technology on non-industrialized societies.

24. Moore, Ruth E. Man, Time, and Fossils. New York: Alfred A. Knopf & Co., 1953.

An excellent and highly readable discussion of evolution with attention to important archaeological remains and techniques.

25. Neugebauer, O. The Exact Sciences of Antiquity. Princeton: Princeton University Press, 1952.

Contains interesting material on the development of scientific thought in some of the early civilizations and the pre-historic background to this development.

26. Piggett, Stuart W. Prehistoric India to 1000 B.C. New York: Penguin Books, 1950.

27. Redfield, Robert. The Primitive World and Its Transformation. Ithaca, N. Y.: Cornell University Press, 1959.

A consideration of the effect on primitive societies brought about by the advent of civilization.

28. Sauer, Carl O. Agricultural Origins and Dispersals. Washington, D.C.: American Geographical Society, 1952.

Considers whether agriculture was invented many times or only once with many local variations and applications.

29. Tax, Sol, ed. Evolution After Darwin, Vol. II. Chicago: University of Chicago Press, 1960.

A collection of papers on the theories and evidence on evolution by eminent anthropologists such as: Edgar Anderson, "The Evolution of Domestication"; L. S. B. Leakey, "The Origin of the Genus Homo"; S. L. Washburn and F. Clark Howell, "Human Evolution and Culture"; and G.R. Willey, "Historical Patterns and Evolution in Native New World Cultures."

30. Te-k'un, Cheng. Archaeology in China: I. Prehistoric China. New York: W. Heffer & Sons, 1959.

A non-political appraisal of Chinese pre-history and archaeology.

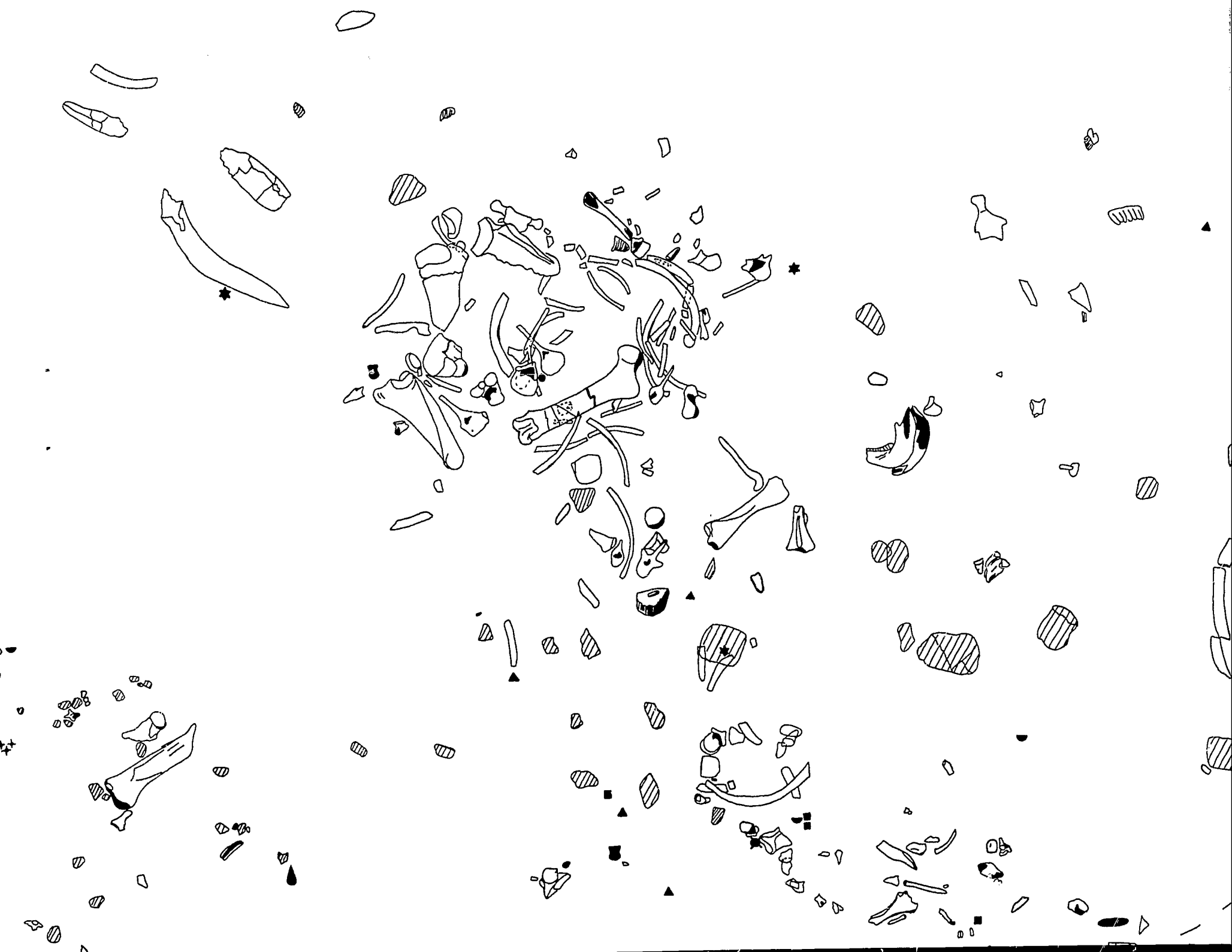
31. van Loon, Hendrik Willem. The Story of Mankind. New York: Pocket Books.

A "popular" history of man from the beginning to the present; easy and interesting writing, not very technical. Short sections on pre-history and the early ancient civilizations.

32. Wheeler, Robert E. M. Early India and Pakistan to Ashoka. London: Thames & Hudson, 1959.

33. Wilson, John E. The Culture of Ancient Egypt. Chicago: University of Chicago Press, 1959.

A very readable work on ancient Egypt; contains a good section on Egyptian pre-history.



# THE MYSTERY OF TORRALBA

## INVESTIGATION NO. 1

CHICAGO SOCIAL STUDIES PROJECT

TORRALBA  
INVESTIGATION #1

A number of archaeologists from the University of Chicago have been investigating a very ancient site at Torralba, Spain. In their digging, they have uncovered materials deposited long ago in prehistoric times. The drawings attached represent all the remains found on a single level (level B<sup>4</sup>a) at this site. It is through these materials that the mystery of Torralba may be solved. In the problems that follow you will have an opportunity to consider many of the same questions the investigators have tried to answer.

The men who occupied level B<sup>4</sup>a at Torralba are believed to have lived roughly 500,000 years ago. At that time, people were "food-collectors," hunting large and small animals and gathering wild fruits, nuts, berries, and roots. They did not settle permanently in one place but moved frequently when they needed to find food. The Torralba site is located on a fertile plain at lat. 41° 8' N, long. 1° 11' E. When level B<sup>4</sup>a was occupied, the climate at Torralba was dry and generally the same as Colorado at timber line today. During this time, the plants were mainly grasses and sedges in the lowlands with some pine trees found in the highlands. Many open meadow spaces were also located in the highlands. The main animals found here included:

elephant - an extinct form; lived in forest or grasslands

horse - an extinct form, closely related to modern horses;  
was grazer

aurochs - a cow-like animal

deer - a red deer (elk); also found were small "fallow"  
deer, more primitive than modern forms

TORRALBA INVESTIGATION #1

In addition, a few birds, rhinoceros, and unidentified mammal bones were found.

The following questions refer to the materials contained in Plates #1, #II, and #III. In attempting to answer the questions, you may use any of the information given in these plates. Use your judgment about what information is useful to you in answering the questions. Be prepared to indicate what information supports each of your answers! Before you answer each question, be sure you consider all the data given as thoroughly as possible.

# PART I

1. It is believed that, for a time, men were present on level B<sup>4</sup>a at Torralba. What materials support this view? List them. What is there about these materials that supports your answer? Be as specific as you can.
2. There is some very important evidence missing that would help to prove the presence of man at Torralba. What things can you list which definitely would show that man has been present on level B<sup>4</sup>a at Torralba if they had been found?

TORRALBA INVESTIGATION #1

3. How do you explain the fact that the things listed in answer #2 are missing? Does this "missing evidence" suggest any ideas to you about why men occupied this site? For what purposes do you think the men of Torralba used this site? Write at least a paragraph stating your answer, and give specific evidence to support that answer!

## PART II

There is some debate about whether or not the entire site was used by its early inhabitants for a single purpose. Some investigators think the evidence shows that the men of Torralba set up "special areas" within level B4a. Look at Plates #1, #II, and #III which show the entire site. Do you see areas that seem to be separate in some way from other areas of the site? After very careful study of these plates, draw a line on Plate #1 around each of the areas you think may have been a separate section of the site. Limit the number of areas to 10. (You may end up with anywhere from 1 to 10 areas.) In the space below, indicate your reasons for making the area(s) you have circled separate from another one.



PLATE I  
TORRALBA 1962-63  
LEVEL "B4a"

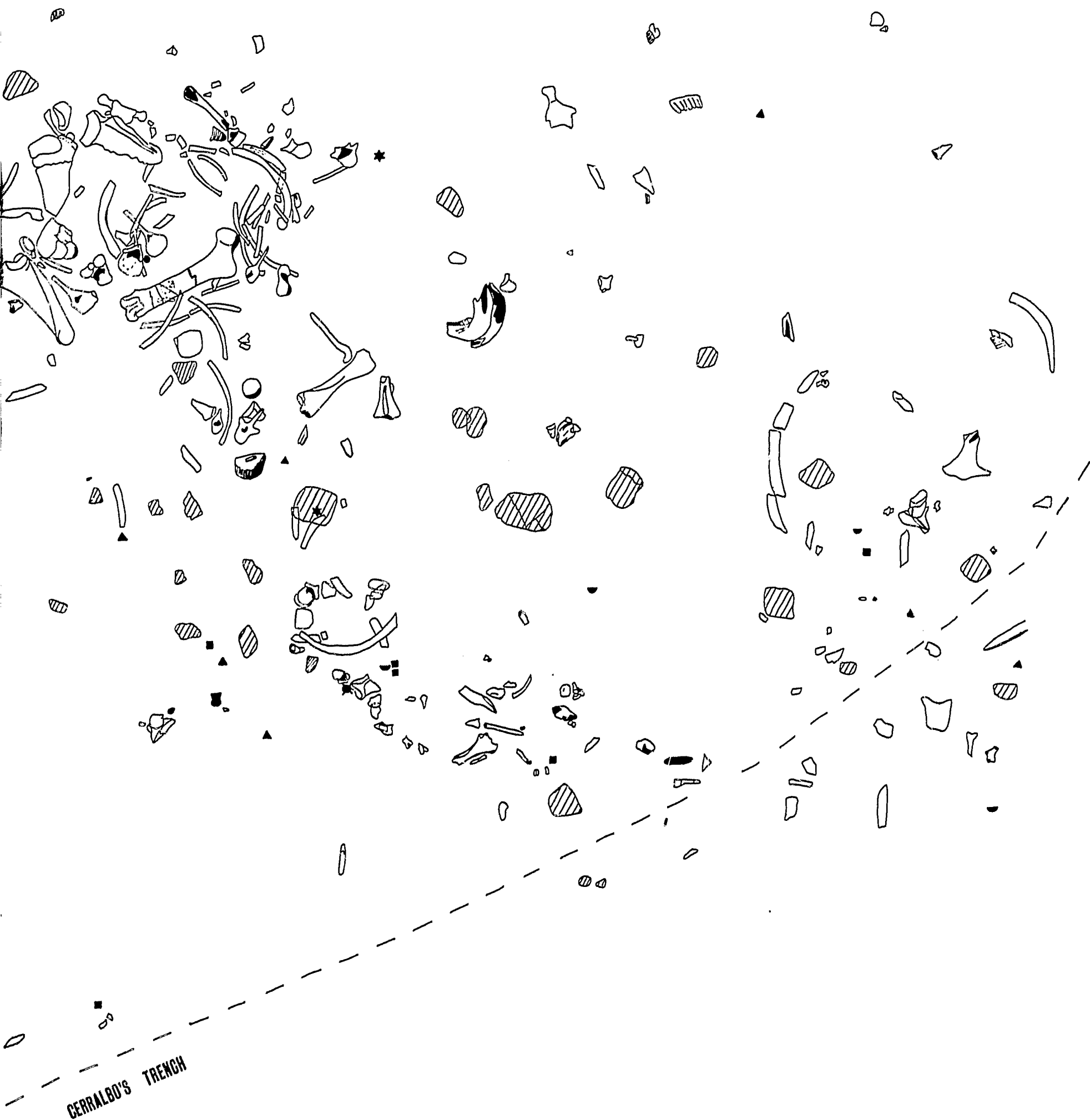


PLATE I  
TORRALBA 1962-63  
LEVEL "B4a"

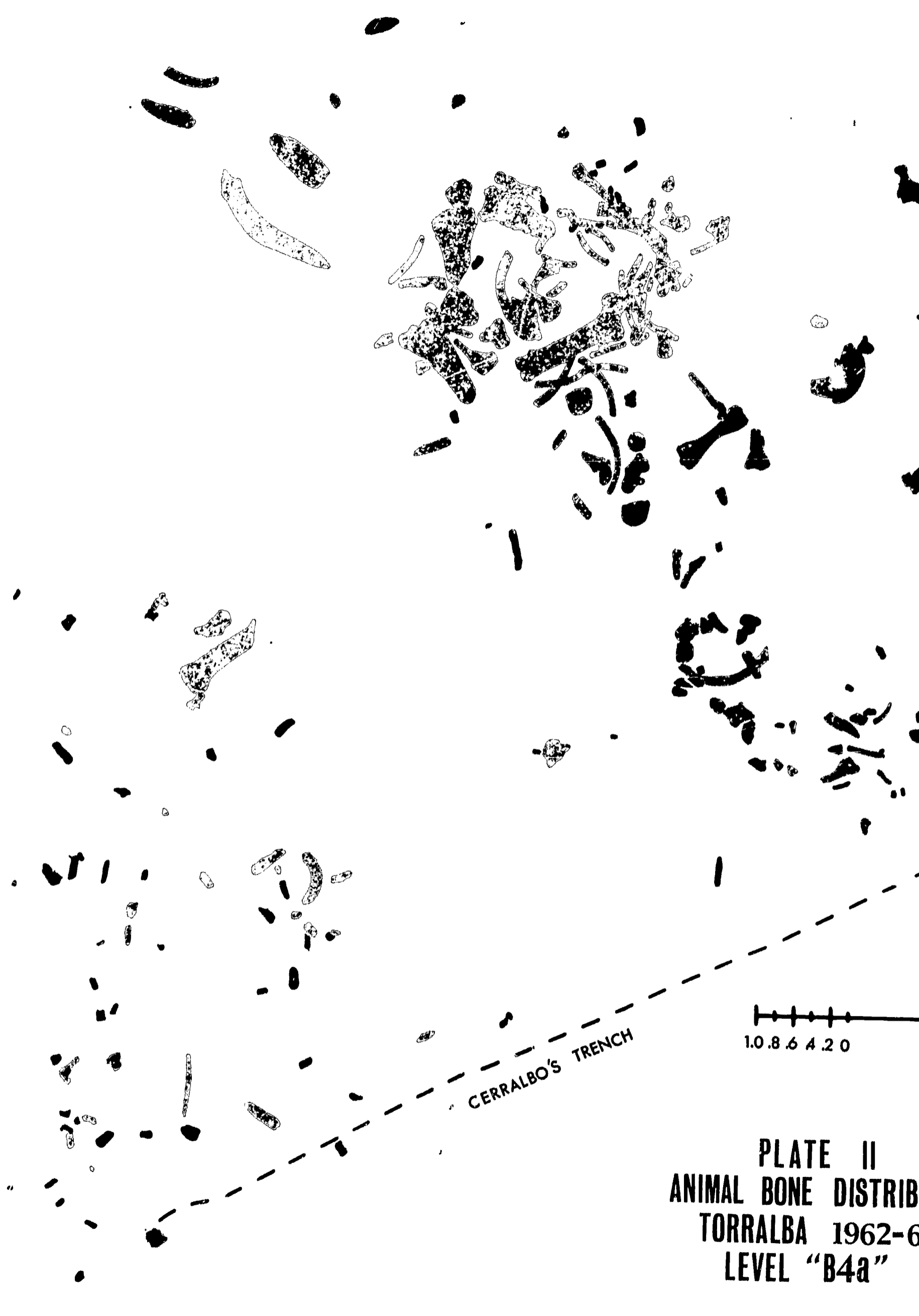


PLATE II  
ANIMAL BONE DISTRIBUTION  
TORRALBA 1962-63  
LEVEL "B4a"

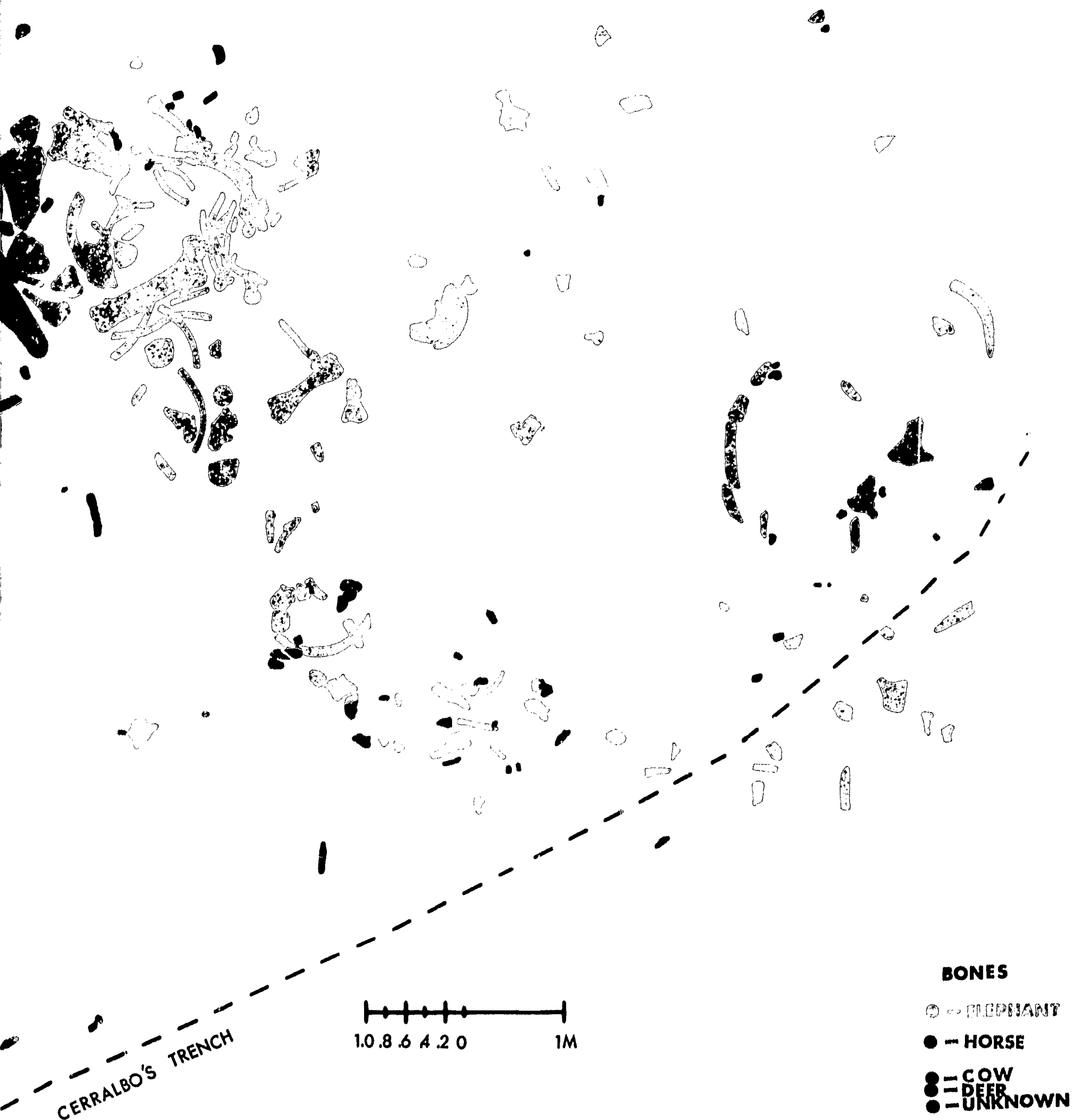


PLATE II  
 ANIMAL BONE DISTRIBUTION  
 TORRALBA 1962-63  
 LEVEL "B4a"

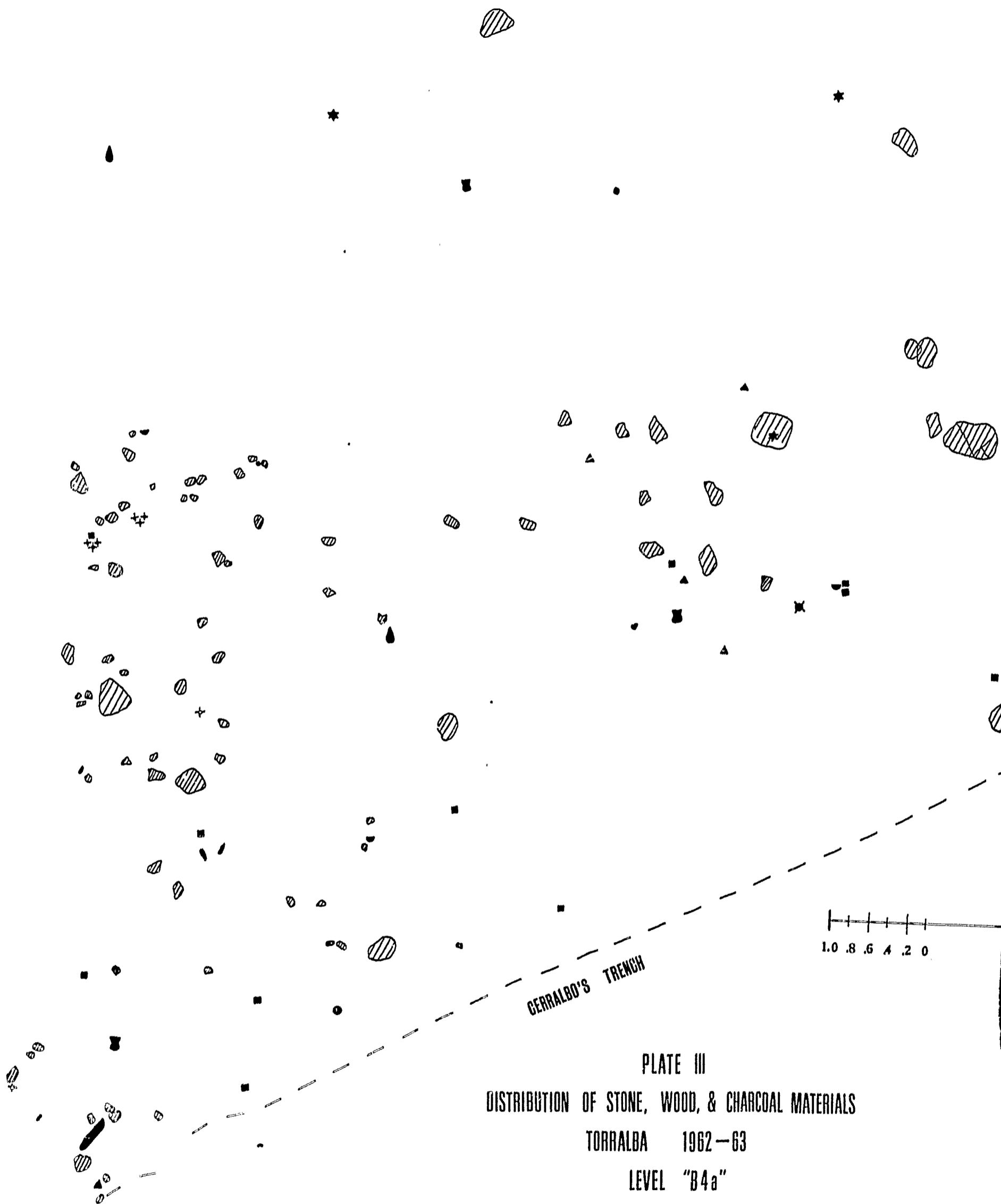


PLATE III  
 DISTRIBUTION OF STONE, WOOD, & CHARCOAL MATERIALS  
 TORRALBA 1962-63  
 LEVEL "B4a"

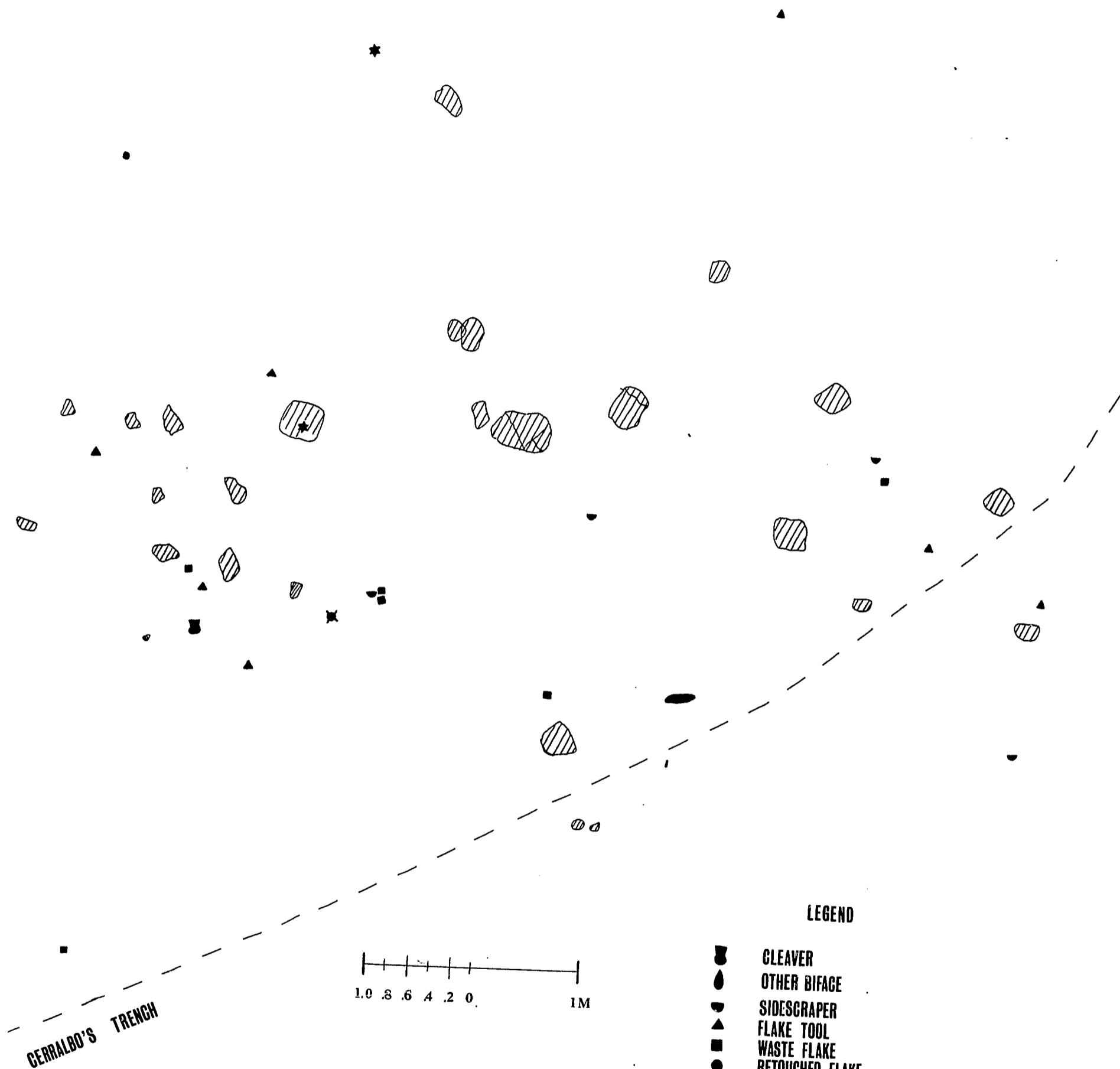
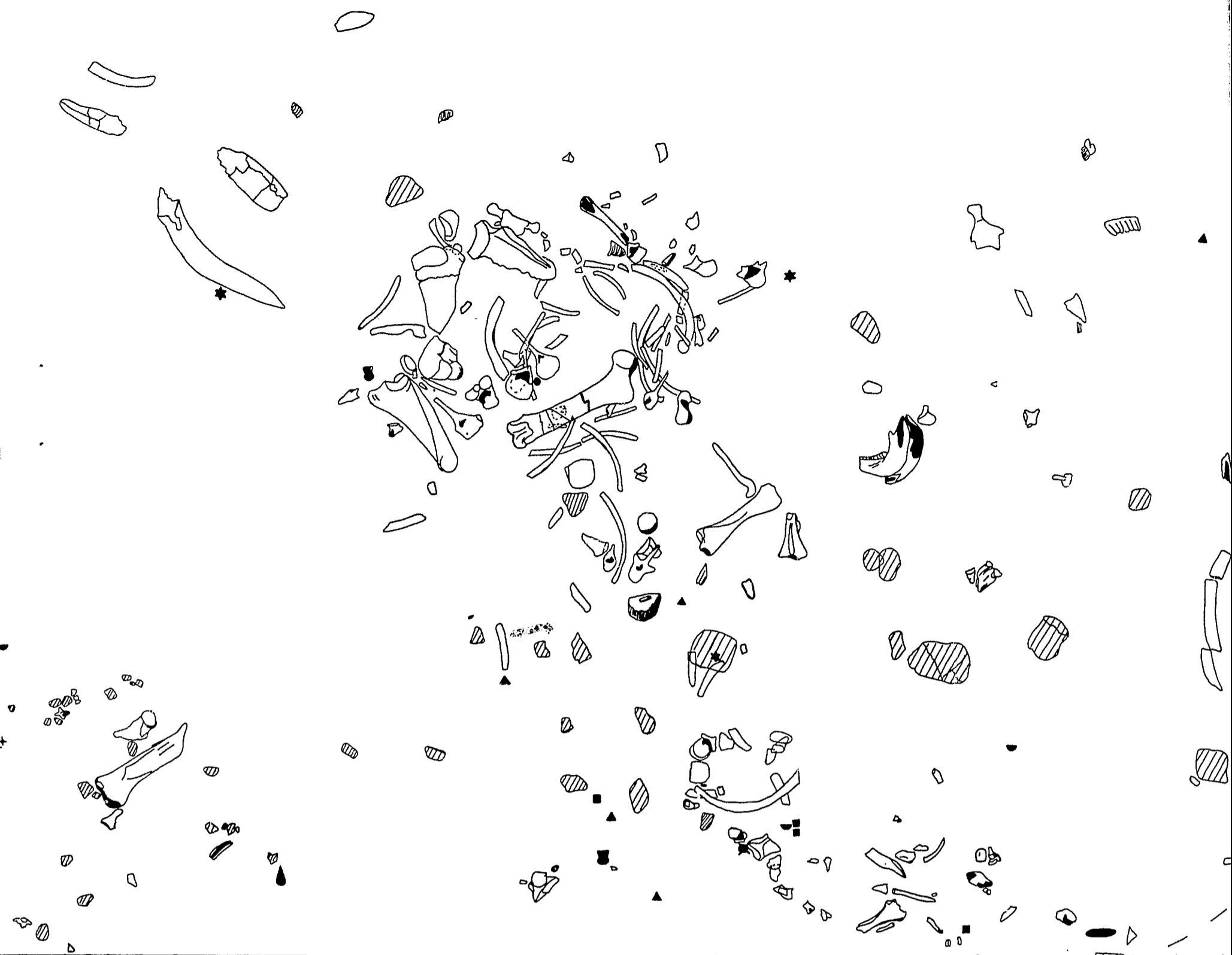


PLATE III

DISTRIBUTION OF STONE, WOOD, & CHARCOAL MATERIALS

TORRALBA 1962-63

LEVEL "B4a"



# THE MYSTERY OF TORRALBA

## INVESTIGATION NO. 2

CHICAGO SOCIAL STUDIES PROJECT

## TORRALBA

### INVESTIGATION #2

#### PART I

On the following pages are drawings which represent stone tools found on level B4a at Torralba. There is a drawing for each of the tool types for which there are symbols on your site plan (a cleaver, a flake tool, etc.). Use these drawings and models of these same tool types to complete the Tool Chart on the next page. As you fill in the chart, remember that there is no "one right answer" for you to give. You are being asked for your own observations and ideas! Therefore, you should be sure to examine each tool type carefully as you work on the chart.

Work with one tool at a time as you complete the chart. For each tool, do the following:

- In the space under column A (Specific Physical Characteristics), put down words which describe the particular qualities of the tool -- qualities that you think might be important in making the stone piece useful as a tool.
- In the space under column B (Possible Uses Suggested by Physical Characteristics), put down your guesses about the purposes for which you think the tool might have been used -- derive this from what you have written down under column A.

## TORRALBA

### INVESTIGATION #2








#### PART I

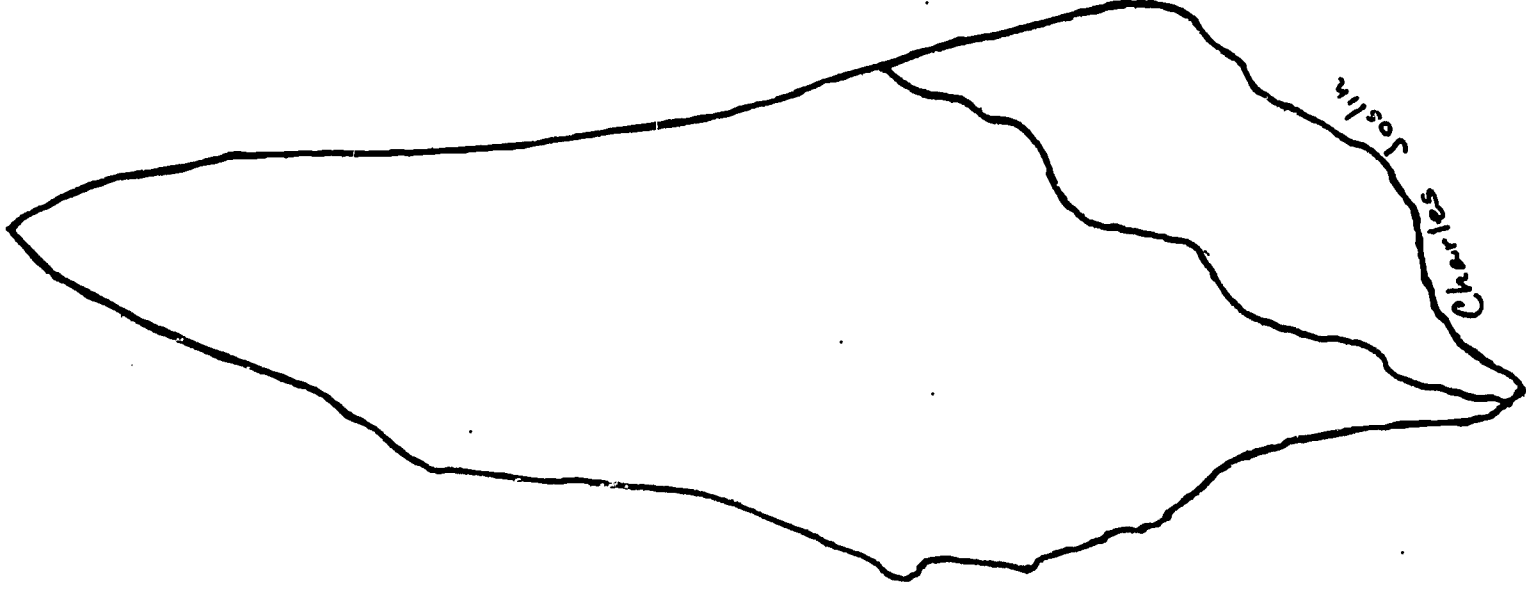
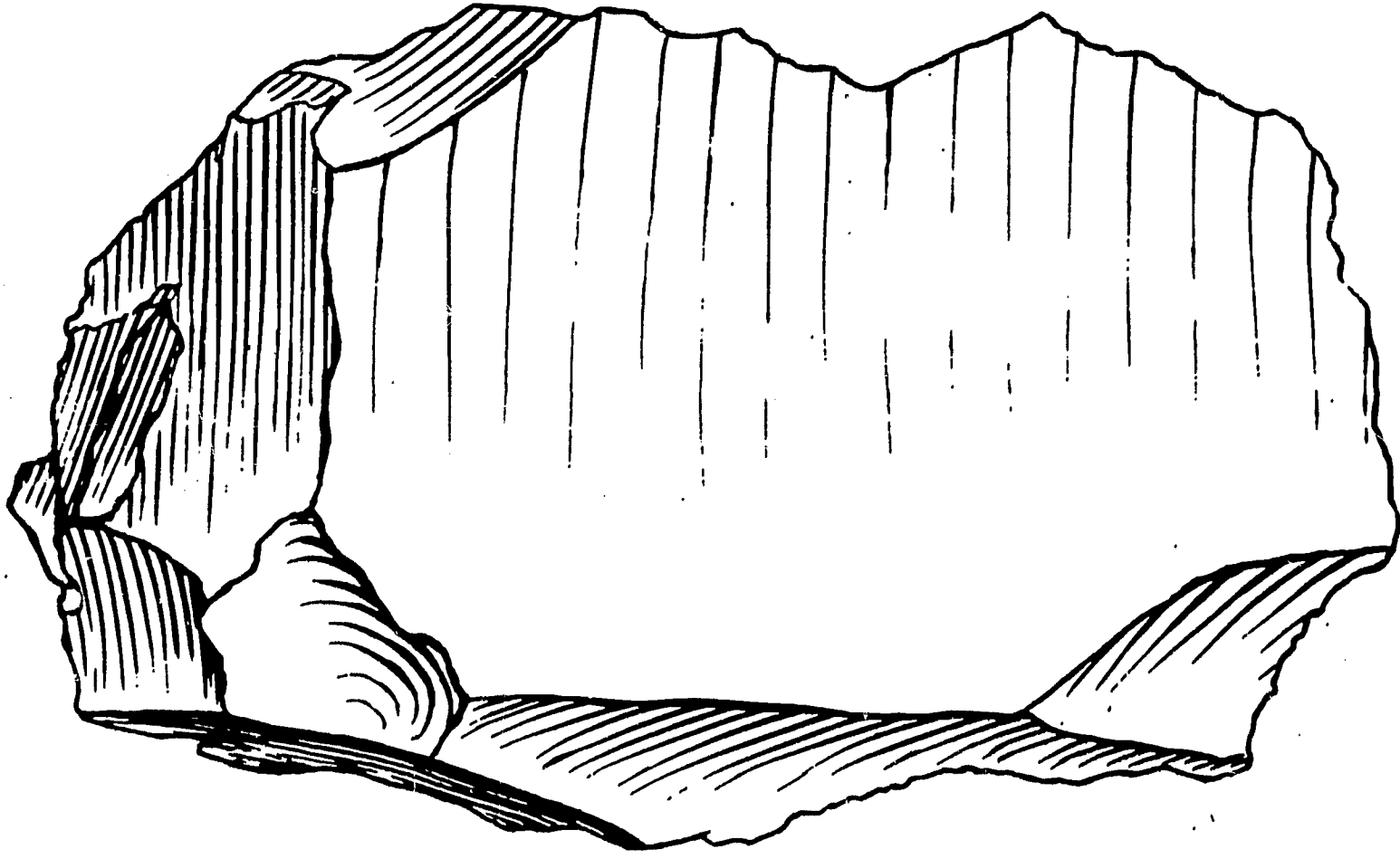
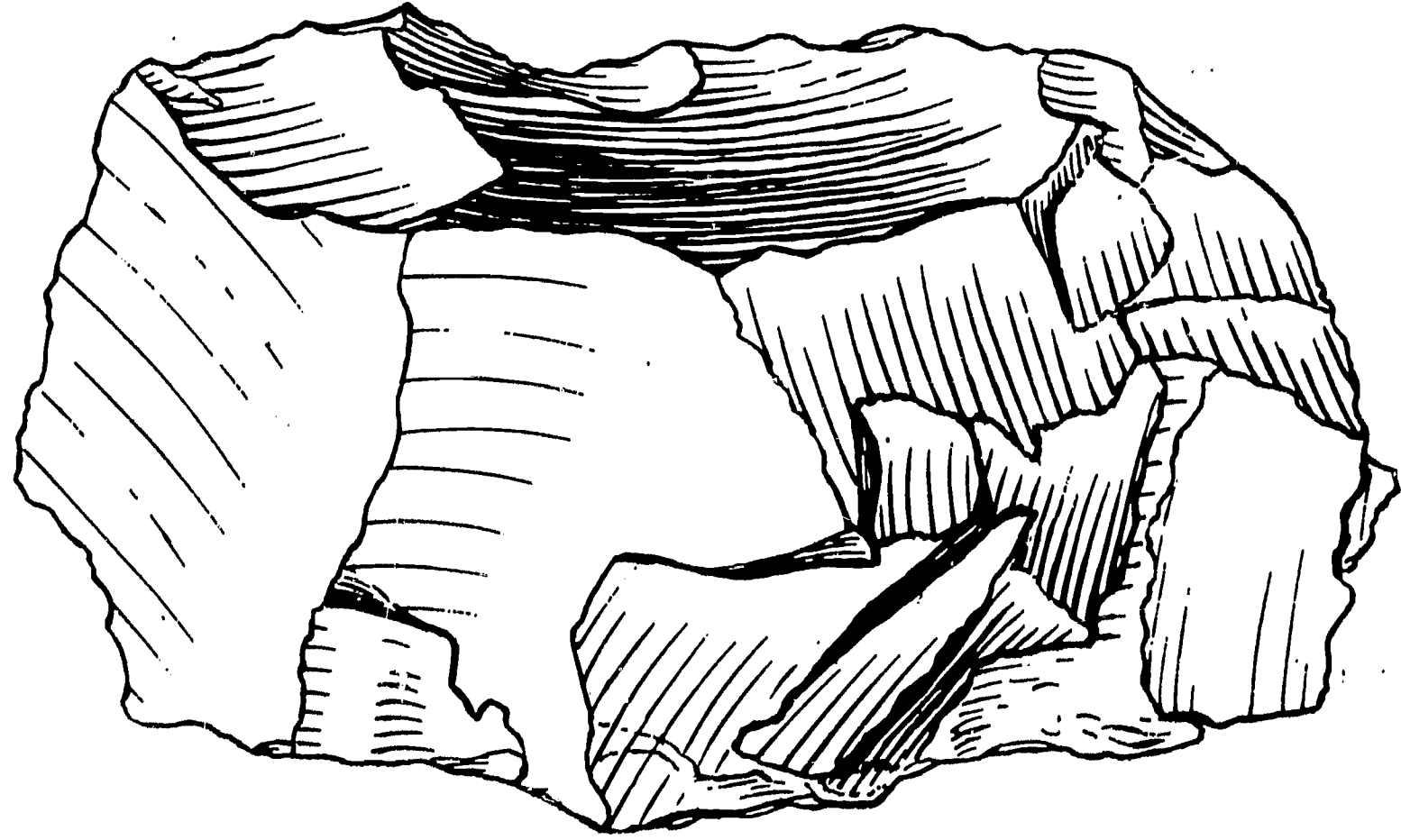
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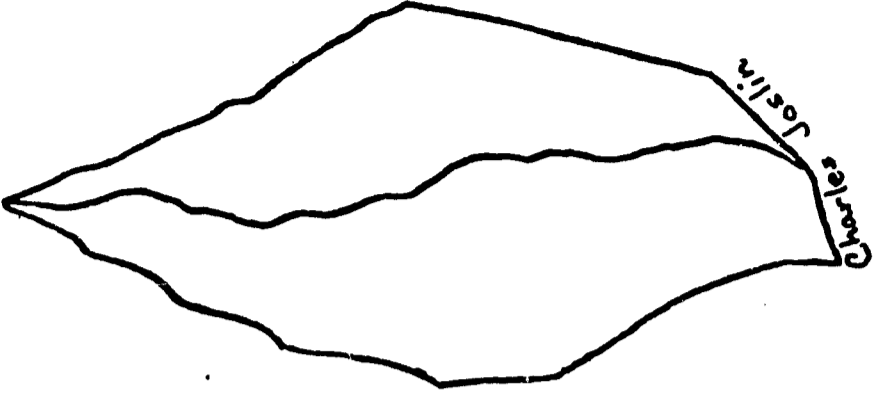
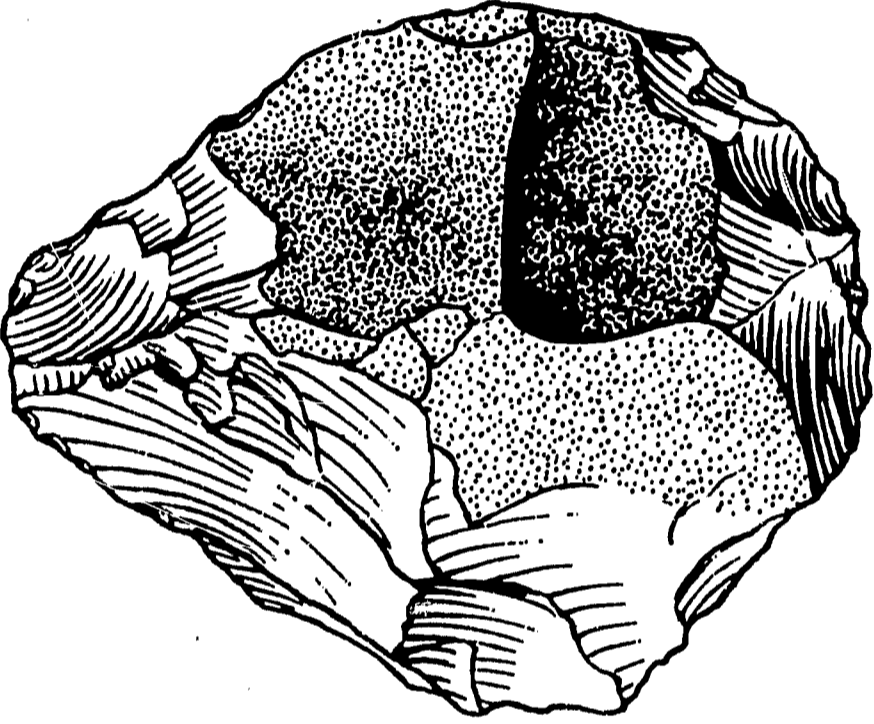
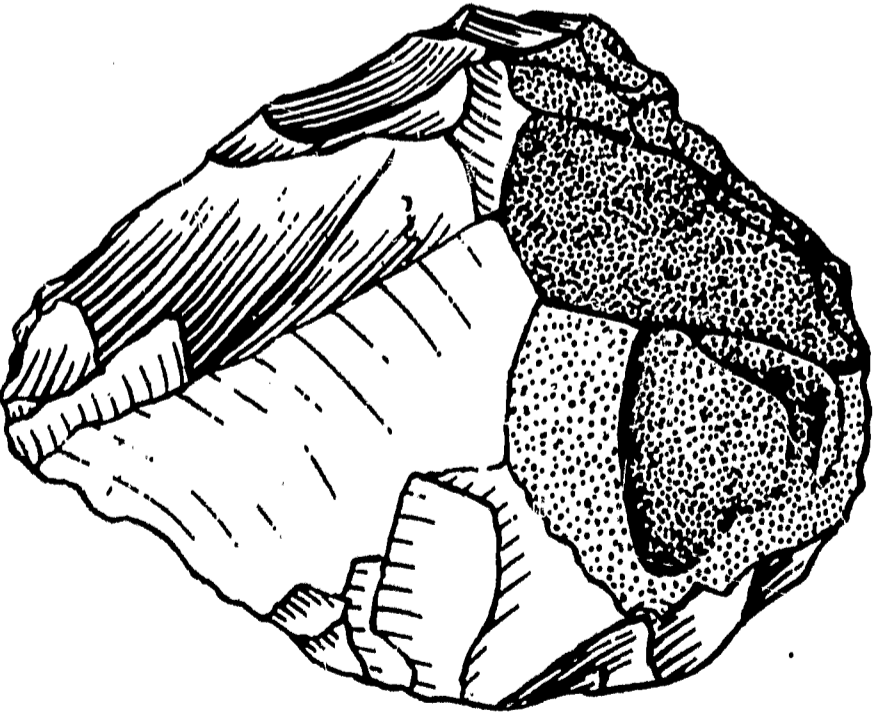
- In the space under column A (Specific Physical Characteristics), put down words which describe the particular qualities of the tool -- qualities that you think might be important in making the stone piece useful as a tool.
- In the space under column B (Possible Uses Suggested by Physical Characteristics), put down your guesses about the purposes for which you think the tool might have been used -- derive this from what you have written down under column A.

TOOL CHART

Implement	A. Specific Physical Characteristics	B. Possible Uses Suggested by Physical Characteristics
<p>Cleaver</p> 		
<p>Other Bifaces</p> 		
<p>Sidescraper</p> 		
<p>Flake Tool</p> 		
<p>Waste Flake</p> 		
<p>Core</p> 		
<p>Hammerstone</p> 		



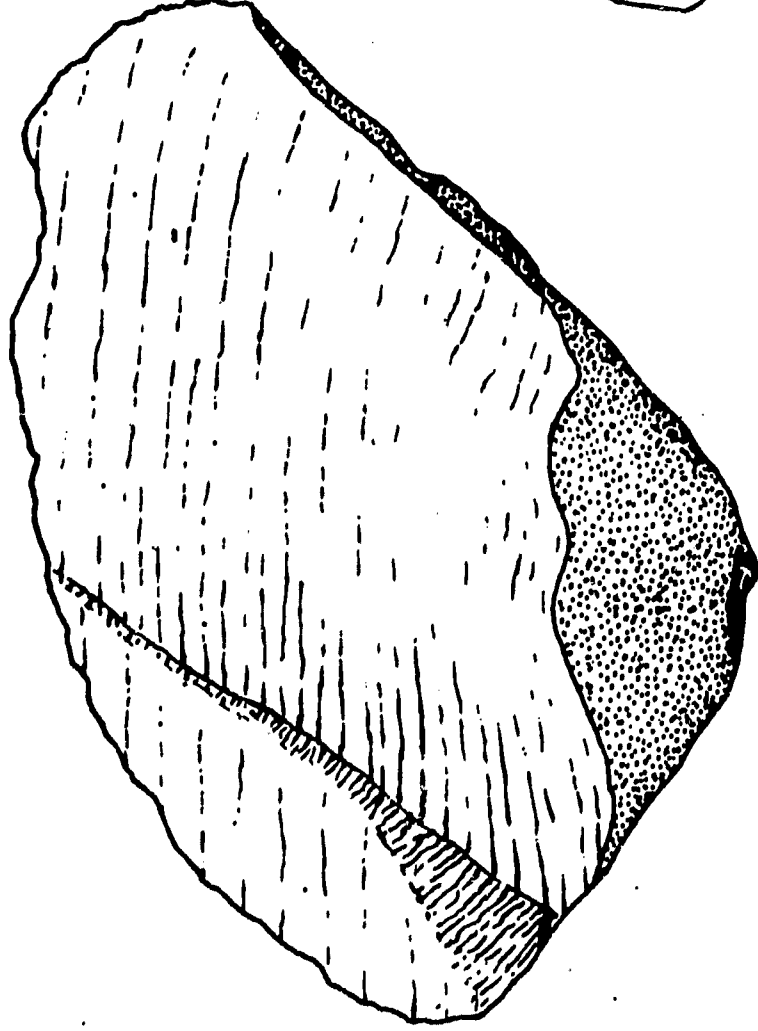
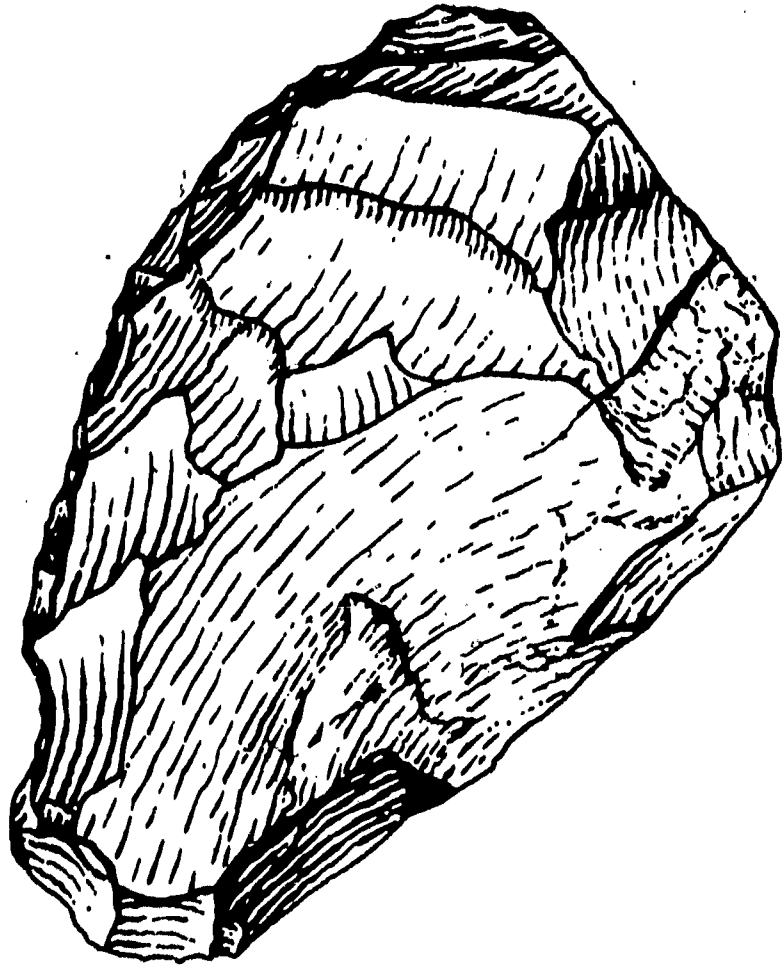
**✓ CLEAVER**  
(actual size)



## OTHER BIFACE

(actual size)

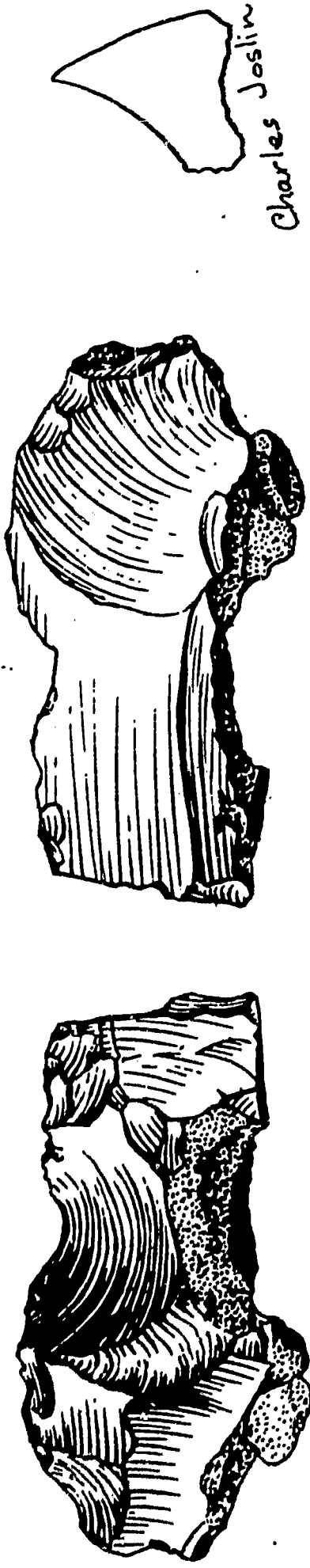
Tools from Torralba  
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Experimental Material - Subject to Revision  
Not for Distribution



Charles Joslin

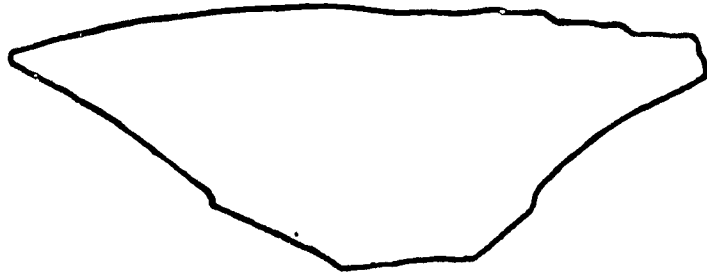
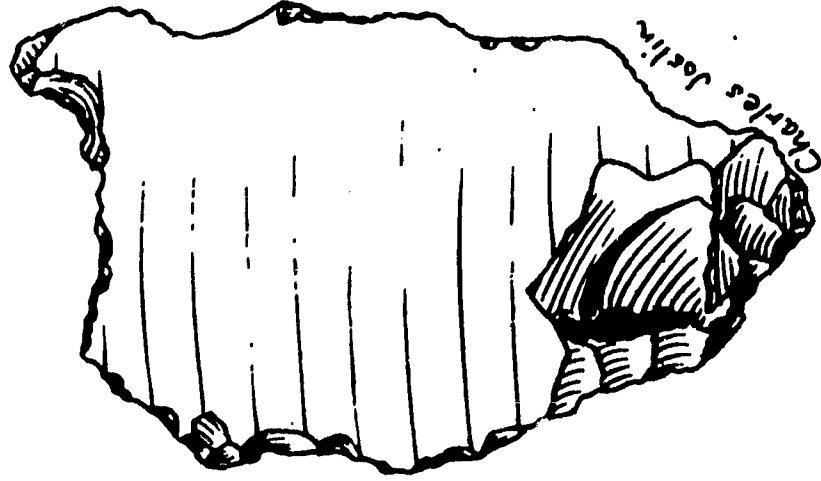
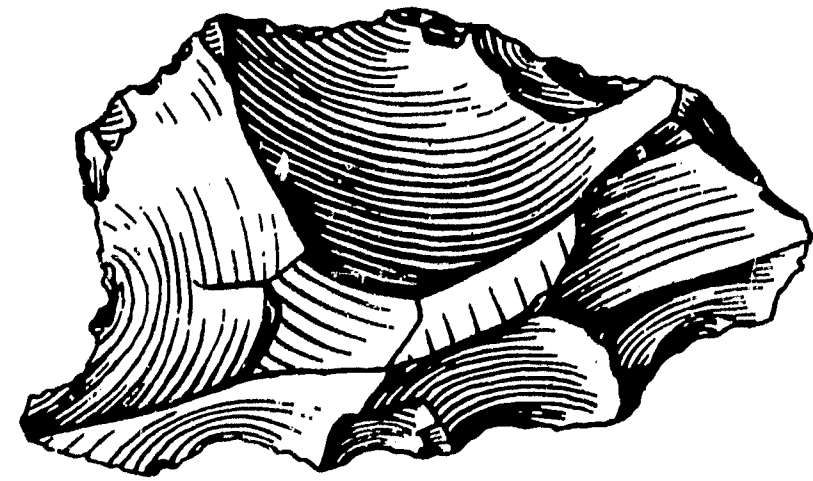
# SIDESCRAPER (actual size)

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Experimental Material - Subject to Revision  
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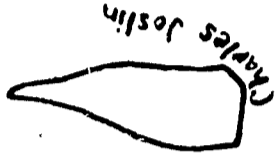
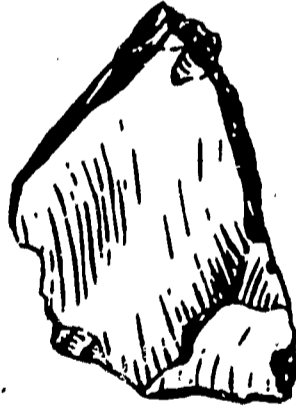
## ▲ FLAKE TOOL

Tools from Terralba  
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## ▲ FLAKE TOOL

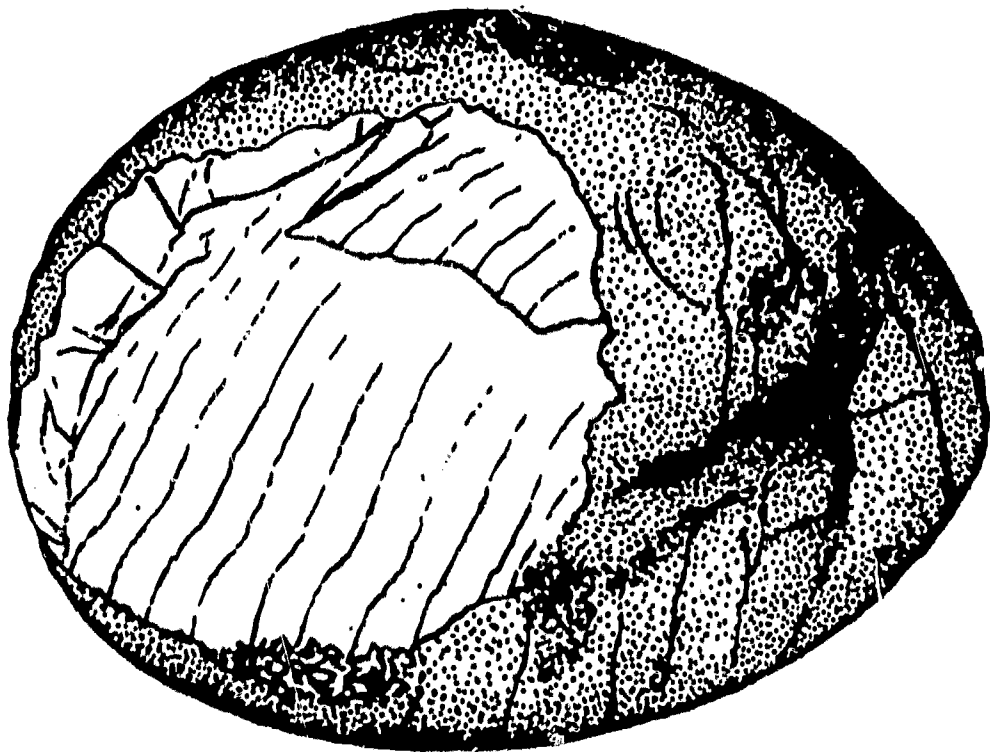
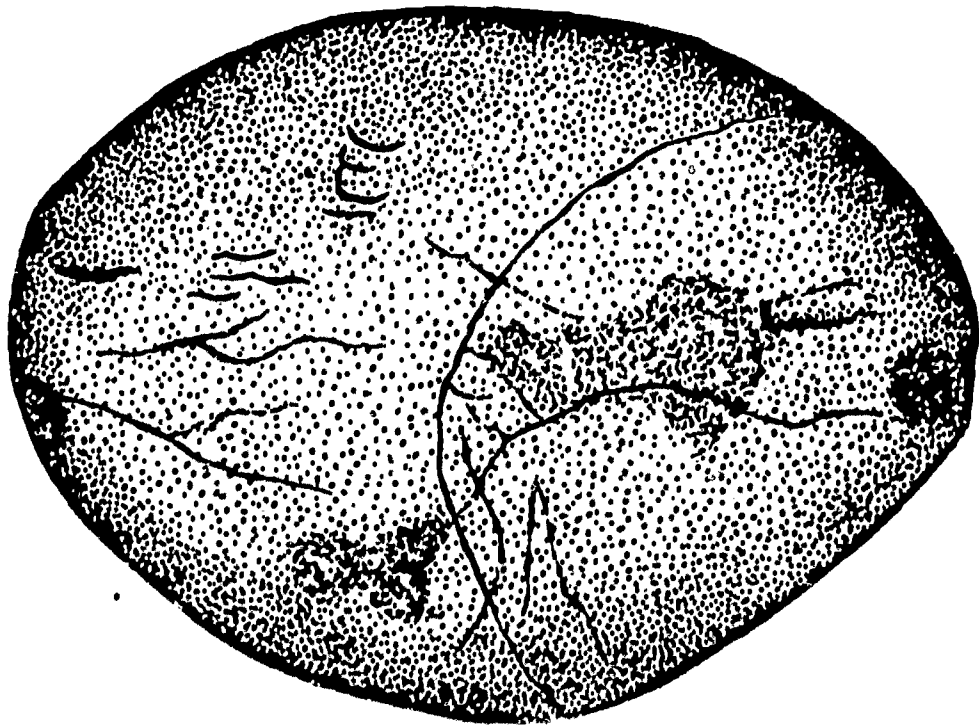
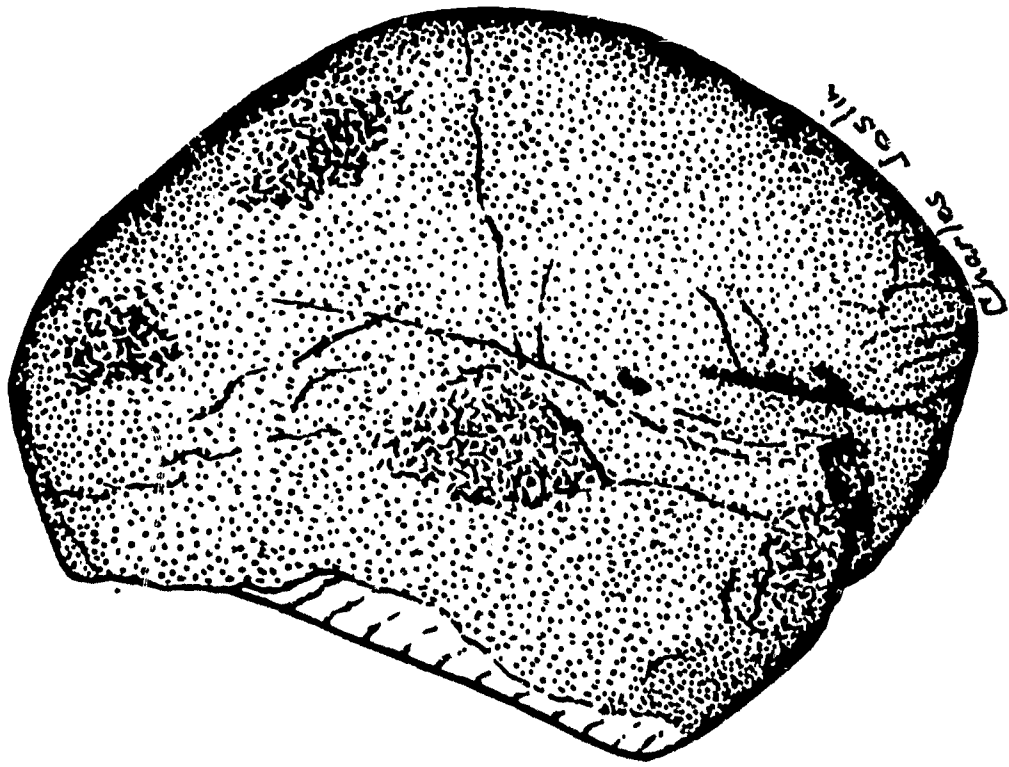
Tools from Torralba  
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# ■ WASTE FLAKE

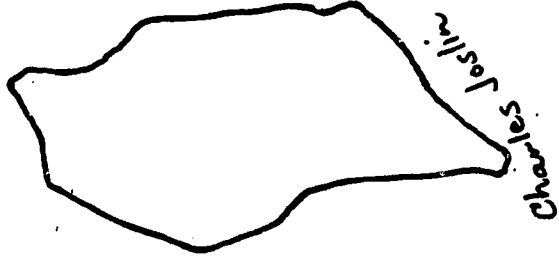
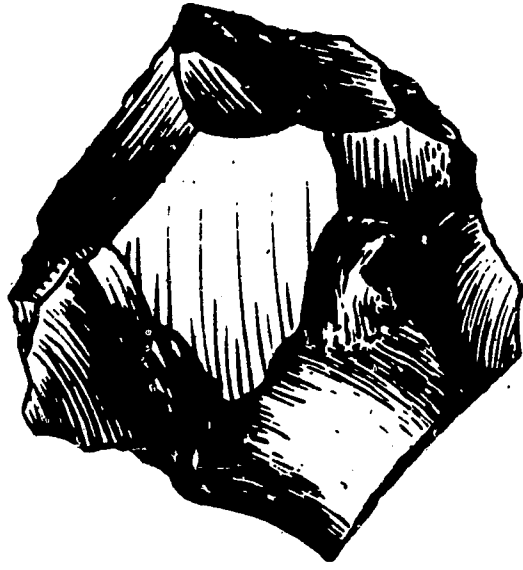
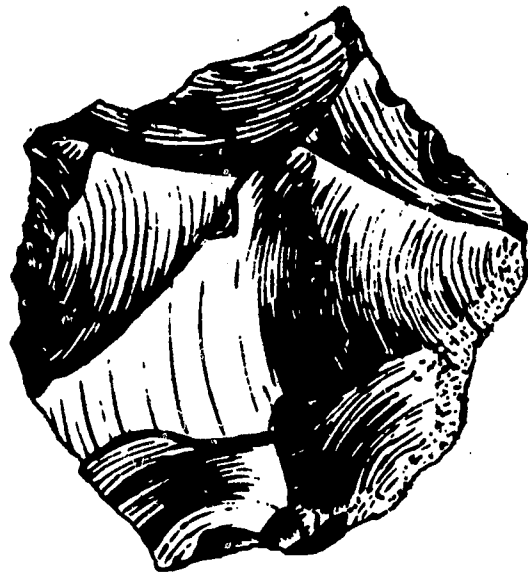
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## ✖ HAMMERSTONE

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 Not for Distribution



Charles Joslin

★ CORE

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PART II

After you have completed the Tool Chart, answer the questions below. Use the drawings and models of tool types and the chart to arrive at your answers.

1. What are the qualities (physical characteristics) of a stone tool which might indicate to an investigator the possible use(s) of that tool?  
How many can you list.

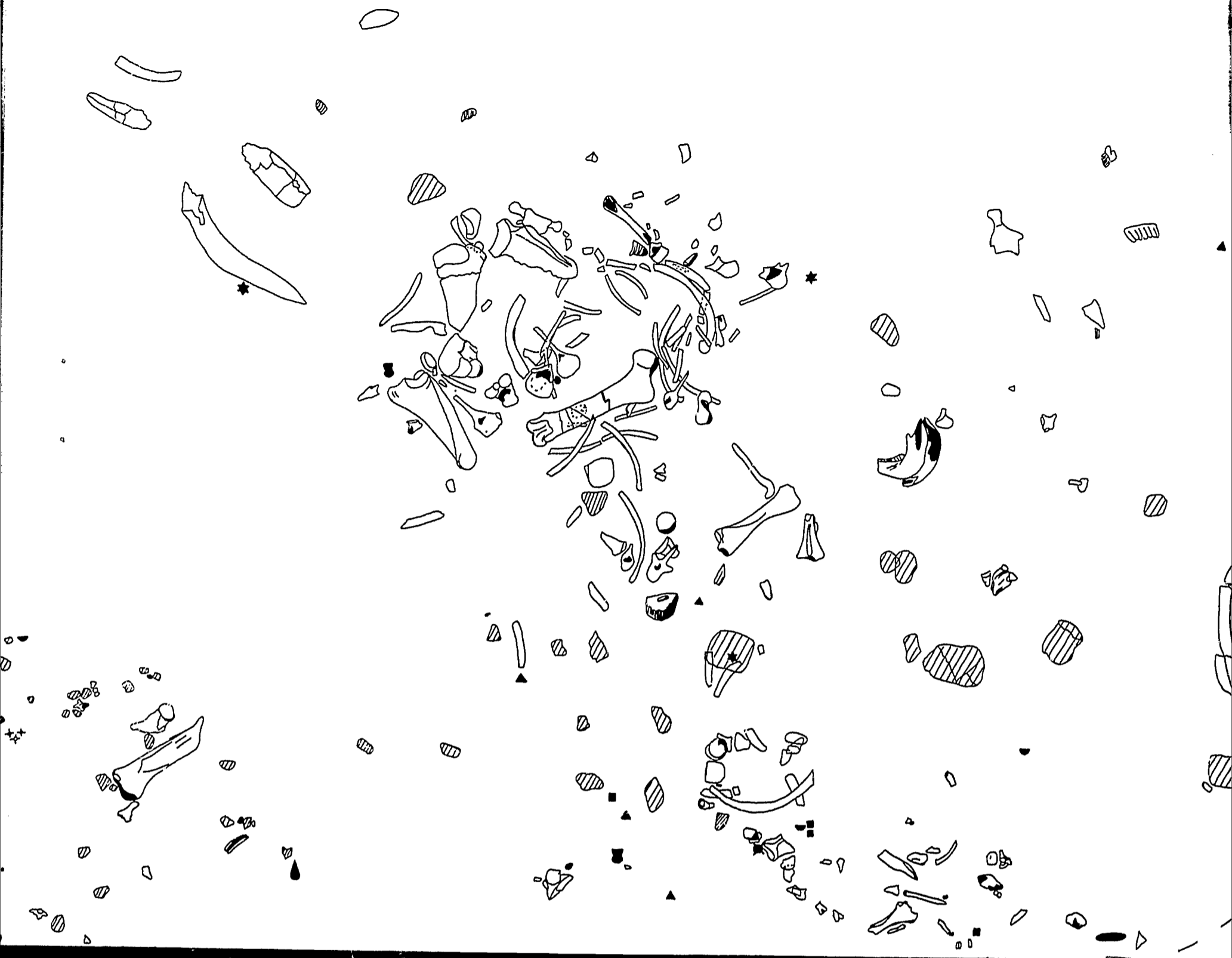
2. Does the name given to a particular tool type (i.e., cleaver, hammer-stone) necessarily identify its use?

TORRALBA INVESTIGATION #2

3. Examine your Tool Chart and the drawings and models of the collection of tools found at Torralba (the total collection of tools found at a particular site is sometimes referred to as a "toolkit"). For what specific types of activities would you "guess" these representative examples of the Torralba toolkit were used? Does the toolkit seem better suited for certain purposes in a "food-collecting" society rather than others?
  
4. What other additional evidence ought to be considered to go about checking whether or not your guess in #3 is correct?
  
5. Assuming your guess in #3 is correct, are there types of implements not found in this toolkit which you might expect to find in the toolkit of a "food-collecting" society? In answering this question, consider the kinds of activities that would be typical of "food-collecting" societies..



Acrylic Model of Stone Tool (Cleaver) —one of classroom set of eight different tools,  
used in conjunction with Investigation No. 2



# THE MYSTERY OF TORRALBA

## INVESTIGATION NO. 3

CHICAGO SOCIAL STUDIES PROJECT

## TORRALBA

### INVESTIGATION #3

As a result of your investigations so far, you have developed some ideas about what the men of Torralba were doing on level B<sup>4</sup>a of this site. Plate #IV shows four separate areas which archaeologists think may have existed at this level. How do these four areas compare with the ones you drew in Investigation #1? Use this plate and the earlier ones to answer the questions that follow.

#### PART I

1. What similarities do you notice in content between Areas 2, 3, and 4?

Consider both the animal and artifact (stone, wood, and charcoal) remains in answering this question. Try to be specific and point out as many similarities as possible. (If you notice any differences, you might also point these out.)

2. What differences in artifact content do you notice between Area 1, on the one hand, and Areas, 2, 3, and 4, on the other?

TORRALBA INVESTIGATION #3

3. What differences can you point out in the condition of animal bones contained in Area 1, on the other hand, and the animal bones found in Areas 2, 3, and 4, on the other?
4. Do your answers to questions 1, 2, and 3 suggest ways in which Area 1 may have been used differently than Areas 2, 3, and 4? If so, how?
5. After careful study, the archaeologists have decided that most of the elephant bones in Area 1, and some of the elephant bones in Areas 2, 3, and 4, come from the same animal--a large elephant. In what way does this information provide clues as to whether or not all four areas were used by the men of Torralba at the same time? What is your opinion on this question?



PLATE IV  
TORRALBA 1962-63  
LEVEL "B4a"

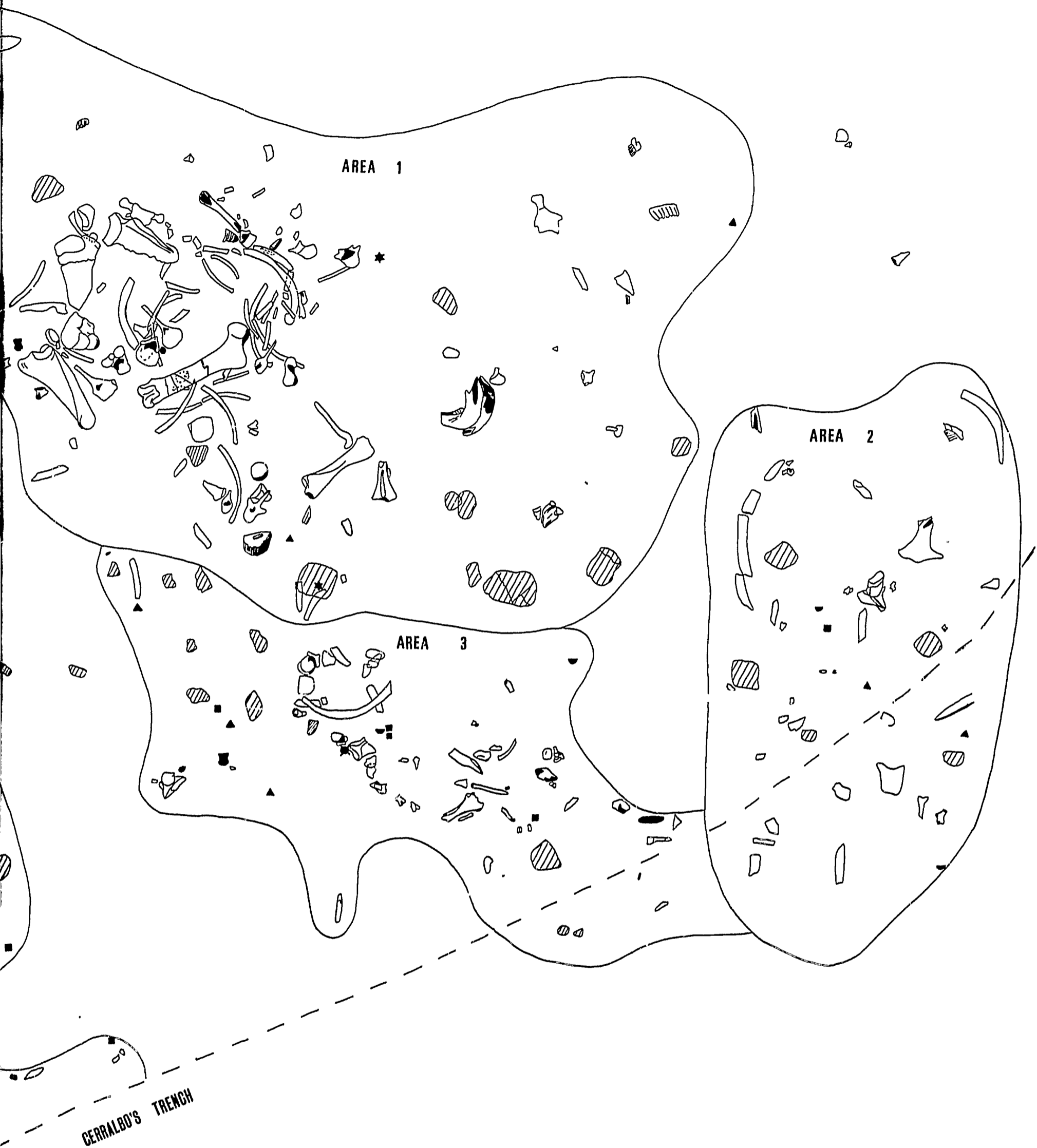


PLATE IV  
TORRALBA 1962-63  
LEVEL "B4a"

PART II

In Investigations #1 and #2, you made some "educated guesses" about the answers to the mystery of Torralba. After further examination of level B4a in Investigation #3, we can summarize what the evidence seems to indicate thus far:

- a. Men did occupy this site for a time.
- b. The entire level was occupied by these men at the same point in time.
- c. The implements found might have had similar uses; on the other hand, certain types of implements have not been found at the site.
- d. Areas 2, 3, and 4 have a number of similarities; on the other hand, these areas differ from Area 1 in a number of ways.

Keeping these points in mind, write a short essay (three or four paragraphs) in which you give your answer to the mystery of Torralba. Include answers to the following questions:

1. For what overall purpose(s) did the men of Torralba use this site? You might compare your answer to the guess you made about this in Investigation #1. Was your first guess right, partly right, or completely off the track?
2. In what ways might the men of Torralba have used some areas of this site differently than other areas to accomplish the overall purpose(s) you listed?

Give specific evidence from the site to support your answers to both parts of the essay!